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10/619,388	07/14/2003	William C. Kress	66329/24817	5439

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EXAMINER	
MENBERU, BENIYAM	
ART UNIT	**PAPER NUMBER**
2625	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/619,388	KRESS, WILLIAM C.	
	Examiner	Art Unit	
	Beniyam Menberu	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 July 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/28/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

On page 2, line 3, "because the printer gamut." is no complete sentence.

On page 2, line 15 "outside the gamut or mapped" should be "outside the gamut are mapped".

Appropriate correction is required.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: reference 304 in Figure 3. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective

action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 14 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 14, lines 1-2 should read "A computer readable medium having an encoded computer program for mapping an image input profile to an image output device, comprising: ".

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 18 recites the limitation "the computer readable medium" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Objections

7. Claim 22 is objected to because of the following informalities:

Claim 22, lines 4-5, "means adapted to select an appropriate transformation table from the transformation table based on the input profile" should read "means adapted to select an appropriate transformation table from the plurality of transformation tables based on the input profile"

Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

9. Claims 1, 8, 14, and 20 are rejected under 35 U.S.C. 102(a) as being anticipated by U.S. Patent No. 6421142 to Lin et al.

Regarding claims 1, 8, and 14 (column 6, lines 49-55), Lin et al disclose a method for printing colors outside the gamut of an image output device (column 5, lines 62-65; column 11, lines 27-35), comprising the steps of:

experimentally determining a relationship between an input primary and an output primary (column 7, lines 19-67; column 8, lines 45;);

mapping the input primary to an output primary (column 6, lines 30; column 21, lines 1-16);

mapping an output of gamut primary to a placement of desired printer primaries (column 11, lines 43-61; Figure 6).

Regarding claim 20, Lin et al disclose an image output apparatus, comprising:

means adapted to communicate with a transformation table (column 15, lines 27-37), the transformation table comprising means adapted to map an input primary to an output primary (column 6, lines 30; column 21, lines 1-16) and means adapted to map an out of gamut primary to a placement of desired printer primaries (column 11, lines 43-61; Figure 6);

means for receiving an image comprising a plurality of colors from an image input device (column 5, lines 40-45; column 6, lines 6-11);

wherein an output image is created by transforming the plurality of colors from the input image device via the transformation table and at least one of the plurality of colors is outside the image output device's gamut (column 21, lines 1-16; column 11, lines 26-37).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claim 2, 3, 4, 9, 10, 11, 15, 16, 17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6421142 to Lin et al in view of U.S. Patent No. 6437792 to Ito et al.

Regarding claims 2, 9, and 15, Lin et al teach all the limitations of claims 1, 8, and 14 respectively. However Lin et al does not disclose the method of claim 1 further comprising combining the mapping of the out of gamut primary with an inside the gamut profile.

Ito et al discloses combining the mapping of the out of gamut primary with an inside the gamut profile (column 25, lines 60-67; column 26, lines 1-5).

Lin et al and Ito et al are combinable because they are in the similar problem area of image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the gamut mapping of Ito et al with the system of Lin et al to implement a profile for outside/inside gamut.

The motivation to combine the reference is clear because Ito et al improves the quality of printing (column 26, lines 19-28).

Regarding claims 3, 10, and 16, Lin et al teach all the limitations of claims 1, 8, and 14 respectively. Further Lin et al in view of Ito et al discloses the method of claim 1 further comprising creating a transformation table, the transformation table comprising an inside the gamut profile and the mapping an output of gamut primary to a placement of desired printer primaries (Lin et al: column 11, lines 43-61; Figure 6; column 21, lines 1-16; Ito et al: column 12, lines 14-24).

Regarding claims 4, 11, and 17, Lin et al in view of Ito et al teaches all the limitations of claims 3, 10, and 16 respectively. Further Lin et al disclose the method of claim 3, the steps further comprising:
receiving an image input from an image input device, the image comprising colors inside the gamut and outside the gamut; and converting the image colors to output colors via the transformation table (column 21, lines 26-53).

Regarding claim 21, Lin et al teaches all the limitations of claim 20. Further Lin et al discloses the apparatus of claim 20 wherein the image input device is selected from the group consisting of a scanner, and a digital camera (Lin et al: column 5, lines 51-53; column 1, line 35-37) and Ito et al disclose wherein image input device further includes a monitor (Ito et al: column 1, lines 64-66).

12. Claims 5, 6, 12, 13, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6421142 to Lin et al in view of U.S. Patent No. 6437792 to Ito et al further in view of U.S. Patent No. 6781716 to Yoda.

Regarding claims 5, 12, and 18, Lin et al in view of Ito et al teach all the limitations of claims 3 and 10 respectively. However Lin et al in view of Ito et al does not disclose the method of claim 3 wherein a plurality of transformation tables are created, each transformation table is mapped to an image input profile.

Yoda discloses wherein a plurality of transformation tables are created, each transformation table is mapped to an image input profile (Figure 13, reference 341a, 342a, 341b, 342b; column 19, lines 66-67; column 20, lines 1-50).

Lin et al, Ito et al, and Yoda are combinable because they are in the similar problem area of image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the transformation table of Yoda with the system of Lin et in view of Ito et al to implement transformation table for gamut mapping.

The motivation to combine the reference is clear because Yoda provides a system for outputting images with good quality for variety of input (column 3, lines 47-56).

Regarding claims 6, 13, and 19, Lin et al in view of Ito et al further in view of Yoda teach all the limitations of claims 5, 12, and 18 respectively. Further Lin et al in view of Ito et al further in view of Yoda disclose the method of claim 5, the steps further comprising:

receiving an image input from an image input device (Lin et al: column 5, lines 50-60), the image comprising colors inside the gamut and outside the gamut (Lin et al: column 10, lines 44-60; column 11, lines 25-43);

determining a profile for the image input (Yoda: column 20, lines 34-39);

selecting one of the plurality of transformation tables that matches the profile (Yoda: column 20, lines 43-50); and converting the image colors to output colors via the transformation table (column 19, lines 25-31; column 20, lines 47-50).

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6421142 to Lin et al further in view of U.S. Patent Application Pub. No. US 2003/0098986 A1 to Pop.

Regarding claim 7, Lin et al teaches all the limitations of claim 1. However Lin et al does not disclose the method of claim 1 wherein the image output device has a mode selected from the group consisting of perceptual, saturation and colorimetric.

Pop discloses wherein the image output device has a mode selected from the group consisting of perceptual, saturation and colorimetric (page 2, paragraph 13, lines 1-3; page 6, paragraph 60-65).

Lin et al and Pop are combinable because they are in the similar problem area of imaging system.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the mode selection of Pop with the system of Lin et al to implement mode selection for output device.

The motivation to combine the reference is clear because the different mode are specific to the kind of print output required (page 6, paragraph 62-65).

14. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6421142 to Lin et al in view of U.S. Patent No. 6781716 to Yoda.

Regarding claim 22, Lin et al teaches all the limitations of claim 20. However Lin et al does not disclose the apparatus of claim 20 wherein the means to communicate comprises means to communicate to a plurality of transformation tables, further comprising: means adapted to determine an input profile; and

means adapted to select an appropriate transformation table from the transformation table based on the input profile.

Yoda discloses wherein the means to communicate comprises means to communicate to a plurality of transformation tables (Figure 13, reference 341a, 342a, 341b, 342b; column 19, lines 66-67; column 20, lines 1-50), further comprising: means adapted to determine an input profile (column 20, lines 34-39); and
means adapted to select an appropriate transformation table from the transformation table based on the input profile (column 20, lines 43-50).

Lin et al and Yoda are combinable because they are in the similar problem area of image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the profile/transformation table of Yoda with the system of Lin et al to implement profile to transformation table mapping.

The motivation to combine the reference is clear because Yoda provides a system for outputting images with good quality for variety of input (column 3, lines 47-56).

Other Prior Art Cited

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent Application Publication No. US 2003/0184557 A1 to Wen disclose gamut processing.

U.S. Patent Application Publication No. US 2003/0164968 A1 to Iida disclose gamut processing in color transformation system.

U.S. Patent No. 6388674 to Ito et al disclose color adjustment system.

U.S. Patent No. 7161710 to MacLeod discloses color processing.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beniyam Menberu whose telephone number is (571) 272-7465. The examiner can normally be reached on 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung Moe can be reached on (571) 272-7314. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (571) 272-2600. The group receptionist number for TC 2600 is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

Beniyam Menberu

BM

05/14/2007

KA Williams

KIMBERLY WILLIAMS
PRIMARY PATENT EXAMINER